RYAN HUFF

Network Engineering Leader | IT/OT and Critical Infrastructure | Security | Voice and Collaboration | AI

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SUMMARY

Network engineering leader with 20+ years across enterprise networking, IT/OT security, unified communications, and software development. Lead network engineering for national pipeline operations at Colonial Pipeline, directing 24x7 reliability of ~2,000 critical devices across ~220 IT/OT sites, including SCADA and telemetry networks. Career spans programming, help desk, VoIP, SD-WAN, and AI automation across critical infrastructure, healthcare, and financial services. A servant leader who knows when to be strategic and when to be tactical, equally effective owning architecture and briefing executives or working hands-on through a critical outage, and able to move fluidly between the two as the mission requires.

CORE COMPETENCIES

Network Engineering and Architecture: Enterprise LAN/WAN design, routing and switching, SD-WAN and SASE architecture, QoS, high availability, network modernization, performance tuning, monitoring, cloud networking
OT/ICS and Critical Infrastructure: OT/ICS networks, SCADA and telemetry (MQTT), industrial IoT, IT/OT segmentation and separation controls, regulated 24x7 environments; working knowledge of IEC 62443, NERC CIP, and NIST CSF
Security and Cyber Event Management: Network security architecture, zero trust, next-generation firewalls, SASE, security event and incident response, root cause analysis, SOC collaboration, SIEM, IT/OT security processes
Leadership: Servant leadership, strategic and tactical execution, player-coach, executive communication, governance, Scrum (CSM)
IT Service Management: Help desk and service desk leadership, ITSM, SLA-driven service delivery, 24x7 operations
Voice, UC, and Collaboration: VoIP, SIP trunking, SBCs, TDM-to-SIP migration, Cisco UC, Webex Calling, UCCX, dispatch and trader voice
Industry Experience: Critical infrastructure (pipeline), healthcare (HIPAA environments), financial services, MSP, value-added resellers
AI, Programming, and Automation: AI/LLM strategy and adoption, agentic workflows, MCP, AI TCO modeling, Python, PHP, JavaScript

PROFESSIONAL EXPERIENCE

COLONIAL PIPELINE — Alpharetta, Georgia

Network Engineering Manager — **Mar 2024 to Present**

- Promoted to lead the Network Engineering team during an organizational transition; conducted a SWOT analysis and restructured two 4- to 5-person teams (FTEs and contractors) for strategic alignment.
- Direct 24x7 operations of ~2,000 critical devices (routers, switches, firewalls, load balancers, identity services, industrial IoT) across ~220 IT/OT sites supporting national pipeline operations.
- Manage a Cisco Firepower estate of 150+ firewalls enforcing IT/OT segmentation across OT sites and data centers; policy optimization cut firewall CPU and memory utilization by ~16%, from the mid-90s percent range to 80% or below.
- Led response and recovery for IT/OT boundary firewall incidents: hardware failures, HA split-brain events, and a data center firewall forwarding failure; partnered with Cisco TAC on root cause analysis and designed a preemptive firewall maintenance/reboot program.
- Lead a Palo Alto Prisma SD-WAN program spanning ~220 IT/OT sites and data centers (~$1M initial phase), including the security architecture that maintains IT/OT separation; designed the hub architecture, wrote the charter and risk register, and briefed the CEO.
- Design network roadmaps and architectures for critical energy infrastructure, including a Cisco Catalyst 3850 to Nexus 9000 core replacement across 17 strategic sites and an enterprise Infoblox DDI rollout.
- Drive remote-site resilience by adding redundant power and Starlink backup at remote pipeline sites to reduce technician callouts.
- Own the pipeline controller dispatch voice system (SIP conference bridge, CUCM, Calabrio call recording); authored its runbook.
- Resolved a years-long network problem in the SCADA/telemetry initiative (MQTT) by tuning packet/segment size (MTU/MSS).
- Partnered with SCADA and business teams to resolve application issues in the control center SCADA stack (Ignition Edge, Chariot MQTT) and the legacy stack (AVEVA 7.5 on out-of-support Nutanix and ESXi).
- Worked with cross-functional teams to develop IT/OT network security processes and separation controls in a zero-trust environment.
- Reduced network outages by 40% through consistent configurations and disciplined execution.
- Develop custom tools and processes that improve monitoring, reliability, and uptime, and champion AI and MCP adoption, introducing automation and agentic workflows where they drive value.
- Lead as a servant leader and player-coach, balancing roadmap ownership with hands-on engineering during critical events; set clear expectations, hold the team accountable, coach under-performers, and make tough calls. Brief executive leadership (CTO, CEO).

Telecom and Data Transport Supervisor — **Sep 2023 to Mar 2024**

- Expanded scope to oversee 1,000+ voice/data circuits and 40+ AV/conference rooms (Crestron, Cisco Webex, DTEN, Logi).
- Assumed people-leadership responsibility for the first time, mentoring two direct reports (a junior UC engineer and an AV engineer).
- Saved $200,000 year over year in voice circuit costs by migrating legacy PRIs to centralized SIP trunks, building on prior modernization work to further stabilize and optimize enterprise systems.

Senior Telecommunications Engineer — **Jul 2022 to Sep 2023**

- Owned the enterprise telecommunications footprint: 3-node CUCM, 2-node Unity Connection, IPTrade trader voice, 4 CUBEs, and PRIs.
- Modernized infrastructure by consolidating legacy PRIs to centralized SIP trunks via CUBE, improving resiliency and reducing costs.
- Stabilized misconfigured equipment and redesigned the IPTrade trader voice environment for greater reliability.

- Prepared for cloud migration: replaced 7xxx-series phones with 8xxx/9xxx models, upgraded UC servers, and configured Webex Calling.

MULTIPLE VALUE ADD RESELLERS
Atlanta, Georgia

Senior Solutions Engineer **Dec 2014 to Jul 2022**

Eight years in VAR solutions engineering, retained through three acquisitions.

Anexinet (Sep 2021 to Jul 2022) | Light Networks, acq. by Anexinet (Dec 2019 to Sep 2021) | Byteworks (Jun 2018 to Dec 2019) | ConvergeOne (Nov 2016 to Jun 2018) | SPS, acq. by ConvergeOne (Oct 2015 to Nov 2016) | Adcap, acq. by SPS (Dec 2014 to Oct 2015)

Delivered end-to-end Unified Collaboration and Enterprise Networking solutions across a vendor-agnostic product set.

- Architected, designed, and deployed numerous SD-WAN and SASE solutions (Viptela, Versa, Palo Alto Prisma SD-WAN and Prisma Access); applied this delivery experience to lead SD-WAN at Colonial Pipeline.
- Architected, sold, and deployed the Cisco Unified Communications stack (CUCM, CUC, UCCX, Expressway).
- Delivered paging and mass notification (Singlewire InformaCast Advanced Notification, Syn-Apps SA-Announce) and XMedius FoIP.
- Delivered hybrid, cloud, and on-prem Collaboration Meeting Room (CMR) models and enterprise routing and switching for customers across diverse verticals, including healthcare and financial services.

NETGAIN INFORMATION SYSTEMS
Sidney, Ohio

Multiple Roles, Helpdesk Technician to Senior Engineer **Jan 2011 to Dec 2014**

Progression: Helpdesk Technician I | Helpdesk Technician II | Voice Practice Focus, Technician | Voice Practice Lead | Senior Engineer

- Operated 4,000+ hosted endpoints in an SLA-driven MSP environment with a 100% uptime guarantee.
- Led TDM-to-SIP upstream migrations for clients across verticals; built proprietary monitoring tools and custom software for endpoints.
- Ran Cisco ASR 1000 SBCs, CUBE/SIP-ITSP peering, T1/E1 gateways (2811/2921), CME/CUE 6.x+, and CUCM 7.3 to 9.1.2 (virtual and MCS); troubleshot CUCM, CUPS/IM&P, and UCCX end to end, from endpoint configuration to database replication.
- Supported Layer 2/3 networking (EIGRP, OSPF), QoS, and LAN/WAN environments; installed copper and fiber inside-plant cabling.

RTH CONSULTANTS
Sidney, Ohio

Independent Consultant **Jan 2005 to Jan 2011**

Delivered customized IT solutions: custom software, network assessments, integrations, and equipment configuration and deployment.

- Supported dozens of diverse client network environments on Avaya, Allied Telesis, and Cisco networking equipment.
- Built several types of automation software and scripts for customers.

KIRK NATIONALEASE
Sidney, Ohio

IT Generalist / Programmer **Jan 2002 to Jan 2005**

IT generalist and programmer for a regional equipment leasing firm.

- Developed internal software applications to manage business unit operations.
- Supported users across locations and business units with PC, Mac, and phone issues, plus Cisco and HP campus LAN/WAN.

EDUCATION

Sidney Christian Academy | High School Diploma **1997**

Cisco Self-Study | Ongoing self-directed study in networking and unified communications **2009 to Present**

CERTIFICATIONS, LICENSES, AND AWARDS

- Certified ScrumMaster (CSM), Scrum Alliance | Cisco CCNA and CCNP Voice, Wireless, and Routing & Switching (all retired)
- FCC Amateur Radio License, Technician Class | Call Sign KR4PSN
- Winner, 2016 Cisco Collaboration VT Partner Excellence Award

TECHNICAL SKILLS

Networking: Multi-vendor routing and switching (Cisco, HP, Avaya, Allied Telesis), BGP, EIGRP, OSPF, DMVPN, HSRP, MPLS, QoS, Infoblox
Security, SD-WAN, and SASE: Palo Alto (PA-series, Prisma Access, Prisma SD-WAN/ION), Cisco Firepower (FTD/FMC), Viptela, Versa
Cloud, OT, and SCADA: AWS, Azure, GCP networking (ExpressRoute, OTT VPNs) | MQTT, Chariot, Ignition Edge, AVEVA, Nutanix, ESXi
Voice and Collaboration: Cisco CUCM, Unity Connection, UCCX, Expressway, CUBE, CME/CUE, CUPS/IM&P, ASR 1000 SBC, Webex Calling, Calabrio, IPTrade, InformaCast, Crestron, SIP, T1/E1/PRI, analog/digital telephony
Programming and Data: PHP, Python, JavaScript, Node.js, VB.NET, MySQL, PostgreSQL (exceptional fluency)
AI, Automation, and OS: Claude, Copilot, Replit, MCP, agentic workflows, custom tools | Windows, Linux, macOS, iOS

PUBLICATIONS AND PORTFOLIO

- Author, "Not Another Sales Book: The Engineer's Handbook for Life, Health and Career" (available wherever books are sold)
- Creator, AI Rent vs. Own vs. Hybrid TCO Decision Model | ryanthomashuff.com/ai-rent-vs-own-vs-hybrid-tco-model/

MILITARY SERVICE

US Army: National Guard, 1997 to 2003; Army Reserve Military Police unit, 2003 to 2005 (6x2 contract). Honorably discharged.

ADDITIONAL

US citizen | Annual volunteer at a self-sustaining orphanage community in Honduras | Former Treasurer, Rose Creek HOA